

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) An implantable medical device, comprising:

a sensing circuit;

a pacing circuit; and

a processor coupled to the sensing circuit and the pacing circuit, the processor including a cardiac monitor controller that is upgradeable to a pacemaker controller by programming the implantable medical device to configure the implantable medical device from an implantable cardiac monitor to an implantable pacemaker,

~~wherein the sensing circuit is adapted to be programmed from a circuit including a filter having a first set of cutoff frequencies suitable for far-field electrogram sensing to a circuit including a filter having a second set of cutoff frequencies suitable for intracardiac electrogram sensing when the cardiac monitor controller is upgraded to the pacemaker controller, the first set of cutoff frequencies substantially different from the second set of cutoff frequencies, and the~~
pacing circuit is adapted to be inactive when the implantable medical device is configured to be the implantable cardiac monitor and capable of producing pacing pulses when the implantable medical device is configured to be the implantable pacemaker, and the sensing circuit is programmed to be a circuit including a filter having a first set of cutoff frequencies suitable for far-field electrogram sensing while the pacing circuit is inactive and programmed to be a circuit including a filter having a second set of cutoff frequencies suitable for intracardiac electrogram sensing while the pacing circuit is capable of producing pacing pulses.

2. (Original) The implantable medical device of claim 1, wherein the sensing circuit comprises a band-pass digital filter having programmable filter coefficients.

3. (Previously Presented) The implantable medical device of claim 1, wherein the sensing circuit comprises a first band-pass filter having the first set of cutoff frequencies and a second band-pass filter having the second set of cutoff frequencies.

4. (Original) The implantable medical device of claim 3, wherein the first band-pass filter has a first low cutoff frequency in a range of 0.5 Hz to 10 Hz and a first high cutoff frequency in a range of 30 Hz to 100 Hz.

5. (Original) The implantable medical device of claim 3, wherein the second band-pass filter has a second low cutoff frequency in a range of 10 Hz to 30 Hz and a second high cutoff frequency in a range of 60 Hz to 150 Hz.

6. (Original) The implantable medical device of claim 1, wherein the processor comprises:
a microprocessor; and
a memory circuit coupled to the microprocessor, the memory circuit includes a random access memory containing at least a portion of a control code, including one of a cardiac monitor control code and a pacemaker control code.

7. (Original) The implantable medical device of claim 6, wherein the sensing circuit further comprises an activity sensor circuit to sense at least one physical activity level.

8. (Previously Presented) The implantable medical device of claim 7, wherein the memory circuit comprises a data storage space allowing storage of one or more of an electrogram, the at least one physical activity level, and an activity log reporting detections of predetermined activities.

9. (Previously Presented) The implantable medical device of claim 8, wherein the processor further comprises an activity detector to detect the predetermined activities from one or more of the electrogram and the at least one physical activity signal.

10. (Previously Presented) The implantable medical device of claim 9, wherein the activity detector comprises an arrhythmia detector to detect at least one predetermined type of arrhythmia from the electrogram.

11–56. (Canceled)

57. (Previously Presented) The implantable medical device of claim 1, wherein the processor comprises:

a microprocessor; and

a memory circuit including a read-only memory configured to store firmware and a random-access memory configured to store upgradeable software, wherein at least a portion of the upgradeable software is updated when the cardiac monitor controller is upgraded to the pacemaker controller.

58. (Previously Presented) The implantable medical device of claim 57, wherein the memory circuit includes a control code providing for a safety operation mode when the cardiac monitor controller is being upgraded to the pacemaker controller.

59. (Previously Presented) The implantable medical device of claim 58, wherein the pacemaker controller is further convertible to the cardiac monitor controller by programming the implantable medical device.

60. (Previously Presented) The implantable medical device of claim 59, wherein the random-access memory comprises data storage space reallocated when the cardiac monitor controller is upgraded to the pacemaker controller and when the pacemaker controller is converted to the cardiac monitor controller.

61. (Previously Presented) The implantable medical device of claim 1, comprising an implant telemetry module adapted to receive device configuration instructions via telemetry, the device configuration instructions causing the cardiac monitor controller to be upgraded to the pacemaker controller.

62. (Previously Presented) The implantable medical device of claim 61, wherein the device configuration instructions comprise authorization information, and the processor comprises a

configuration authorization module adapted to permit the cardiac monitor controller to be upgraded to the pacemaker controller upon verification of the authorization information.

63. (Previously Presented) The implantable medical device of claim 62, wherein the configuration authorization module is adapted to permit the cardiac monitor controller to be upgraded to the pacemaker controller upon receiving a device identification code uniquely identifying a device intended to be configured.

64. (Previously Presented) The implantable medical device of claim 61, wherein the processor comprises a configuration authorization module adapted to generate a permission signal upon verifying authorization information in an authorization signal received by the implantable medical device.

65. (Previously Presented) The implantable medical device of claim 1, wherein the sensing circuit is adapted to sense one or more signals indicative of one or more of a physical activity level and a metabolic level.

66. (Previously Presented) The implantable medical device of claim 1, comprising an implantable cardiac resynchronization device converted from an implantable cardiac monitor after the cardiac monitor controller is upgraded to the pacemaker controller.